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**Information technology — Learning,
education, and training — Content
packaging —**

Part 3:
Best practice and implementation guide

*Technologies de l'information — Apprentissage, éducation et
formation — Paquetage du contenu —*

Partie 3: Meilleure pratique et guide de mise en application

Reference number
ISO/IEC TR 12785-3:2012(E)





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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

In exceptional circumstances, when the joint technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide to publish a Technical Report. A Technical Report is entirely informative in nature and shall be subject to review every five years in the same manner as an International Standard.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/IEC TR 12785-3 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 36, *Information technology for learning, education and training*.

ISO/IEC 12785 consists of the following parts, under the general title *Information technology — Learning, education, and training — Content packaging*:

- *Part 1: Information model*
- *Part 2: XML binding*
- *Part 3: Best practice and implementation guide* [Technical Report]

0. Introduction

0.1 Purpose and overview

The primary focus of this part of ISO/IEC 12785 is on sharing existing best practice and providing suggested practice for implementing the functionality included in this part of ISO/IEC 12785. The ISO/IEC 12785 series has been commonly used in the learning, education, and training (LET) domain and this part of ISO/IEC 12785 is intended to support this use. It focuses on the construction of instances of manifest documents and the content packages they define.

0.2 Compatibility

Given the widespread adoption of IMS Content Packaging and the proliferation of hundreds of thousands of IMS content packages, it is important that existing software components continue to process content packages they were designed to handle, and that new software components conforming to the ISO/IEC 12785 series also process the older IMS content packages as designed. Newer systems will need the ability to process the new extension objects¹⁾ introduced in the ISO/IEC 12785 series that enable linking and referencing behaviors. The functionality of these new extension objects are described in Clause 5 of this part of ISO/IEC 12785, and normative descriptions are contained in ISO/IEC 12785-1.

The new extension objects are defined in a separate namespace that leverages the extension points and semantics of the ISO/IEC 12785 series without affecting the existing IMS Content Packaging namespace. ISO/IEC 12785 also separates the lists of vocabulary terms used by certain objects in the information model (and a dedicated new namespace) from the model itself. These details are contained in the IMS GLC Specification Development Note 11: Vocabulary Definition, Registration, and Maintenance Procedures.

By taking this approach, we hope that the best of the past is preserved as it provides a strong foundation for future growth without having to alter the structural integrity of the ISO/IEC 12785-1 information model (a detailed, normative description of backwards and forwards compatibility is contained in ISO/IEC 12785-1).

1) The extension refers to those elements that have been newly introduced with IMS Content Packaging version 1.2 which is a source of ISO/IEC 12785.

Information technology — Learning, education, and training — Content packaging

Part 3: Best practice and implementation guide

1 Scope

This part of ISO/IEC 12785 presents use cases and shows how they are satisfied by ISO/IEC 12785-1 which is derived from the IMS Global Learning Consortium (GLC) Content Packaging version 1.2 (v1.2).

Though not exhaustive, the range of use cases presented in this part of ISO/IEC 12785 illustrate how the most common issues in the creation, management, and playback of learning material can be addressed by the ISO/IEC 12785 series. The use cases were contributed by various implementers and users of the IMS Content Packaging and are based on years of practice.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated reference, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 12785-1:2009, *Information technology — Learning, education, and training — Content packaging — Part 1: Information model*

IETF RFC 1951 (1996), *DEFLATE Compressed Data Format Specification version 1.3*